

Figure 1a

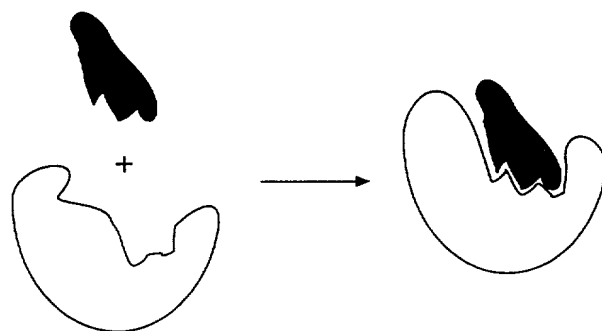


Figure 1b

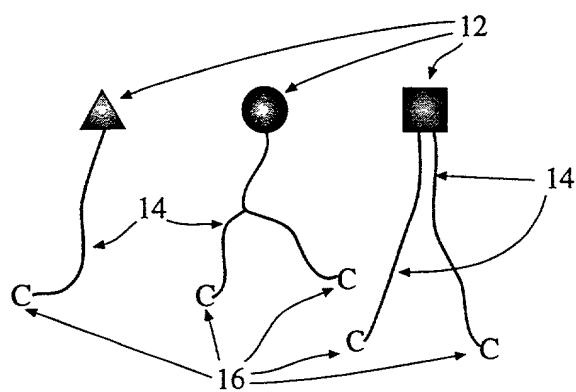
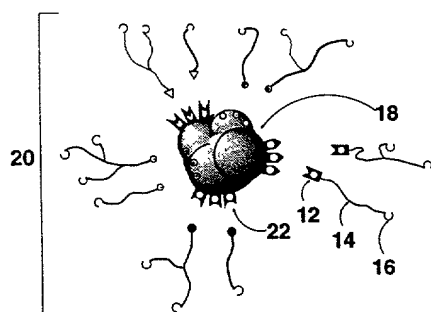
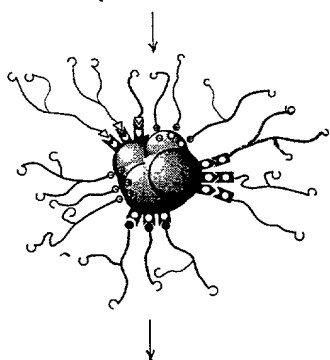


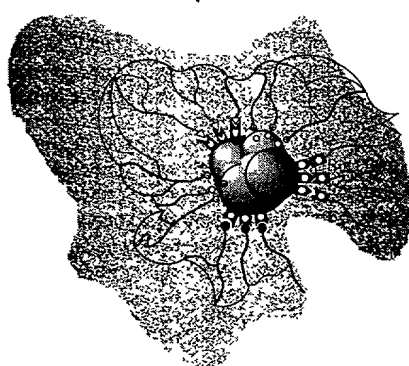
Figure 2(a)



Target Molecule Exposed
to Monomers

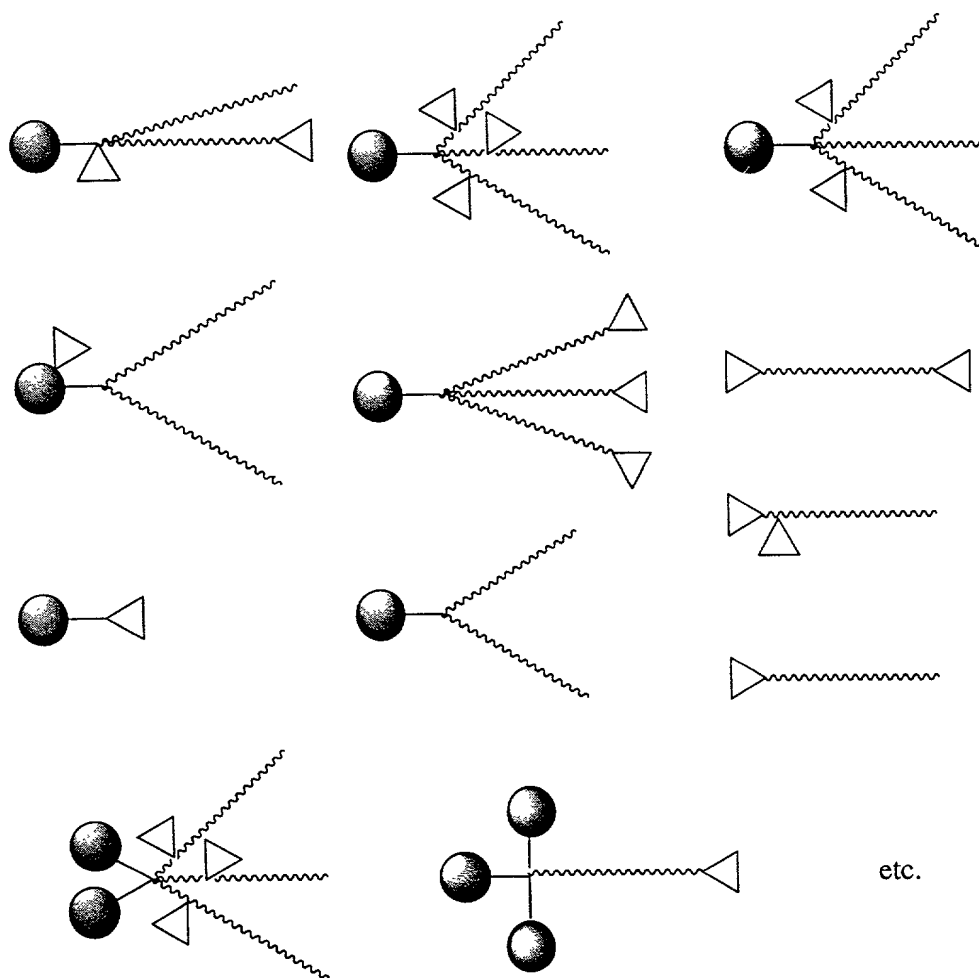


Monomer Heads
Bind to Specific Target Sites



Monomer Tails
Crosslink to Form SPC

Figure 2b



Key to Shapes



Head



Crosslinking
moieties



Tail

etc.

Figure 2c

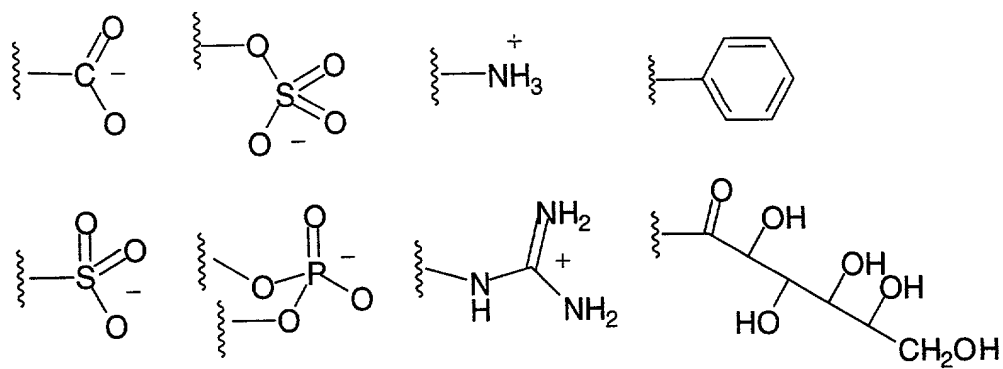


Figure 3

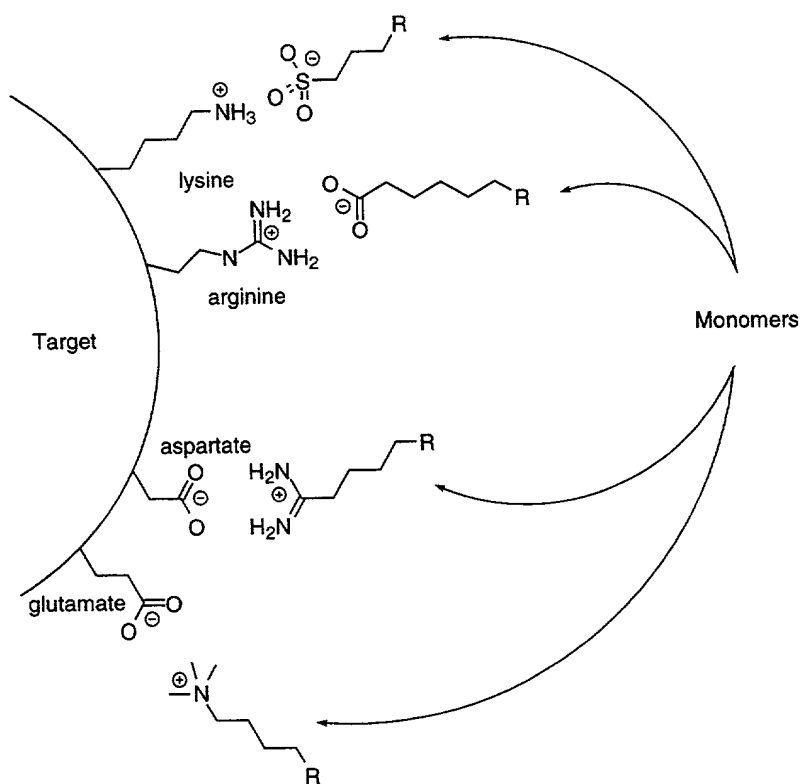
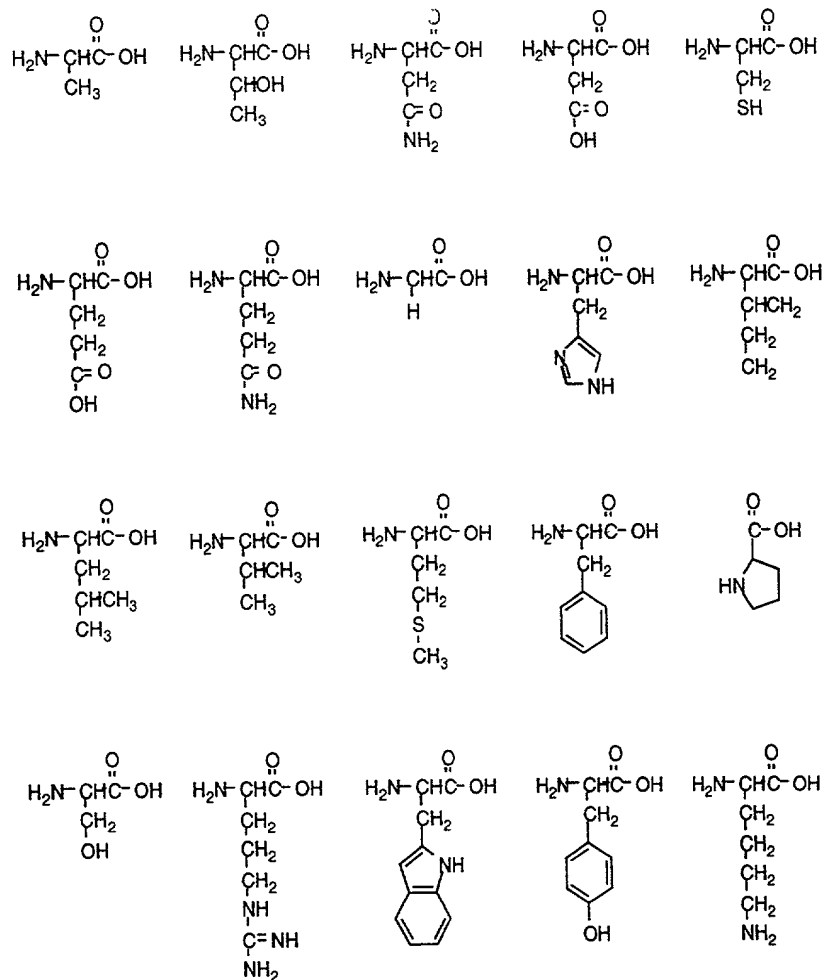


Figure 4



Protect
Add spacer
Add reactive functionality

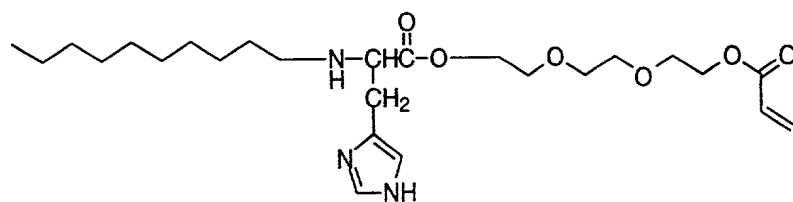


Figure 5



Figure 6

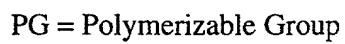


Figure 7

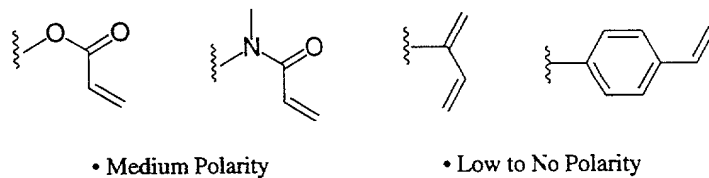


Figure 8

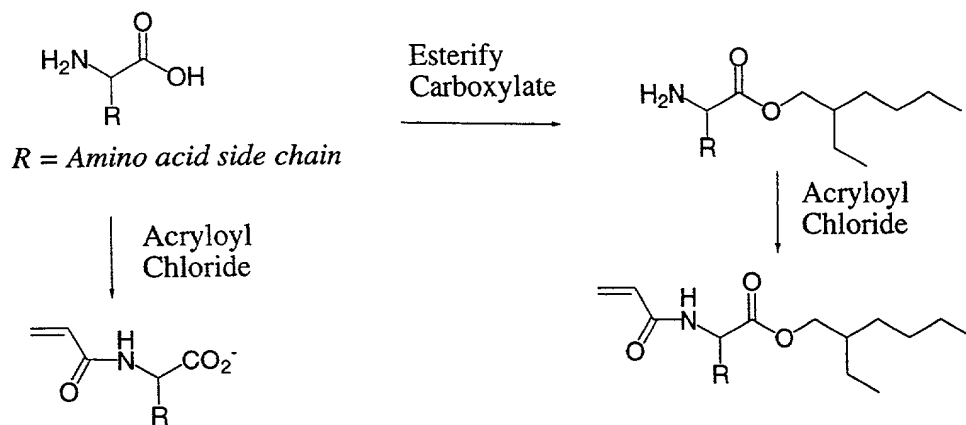


Figure 9

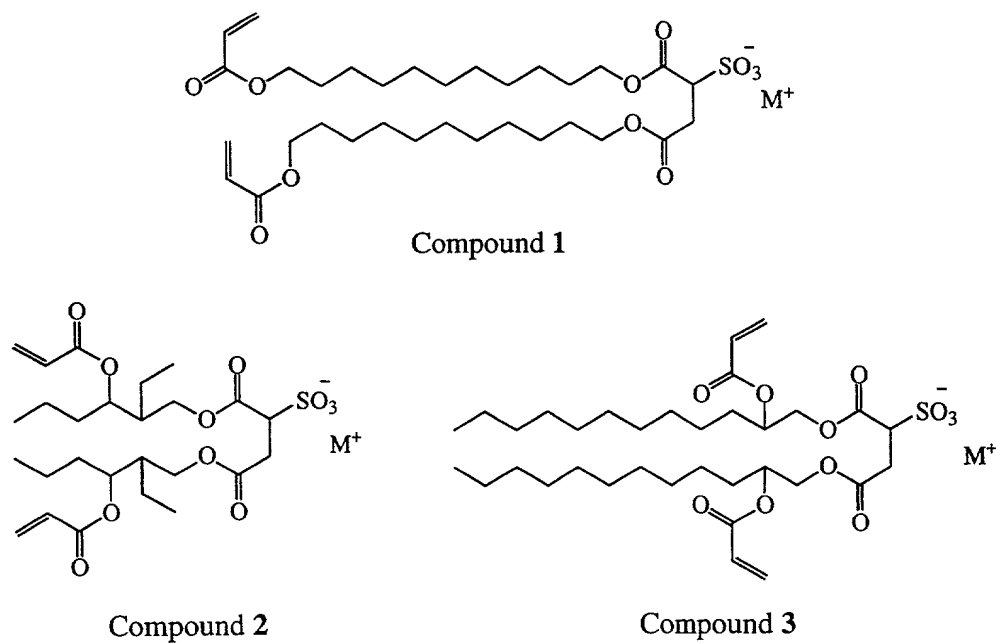


Figure 10

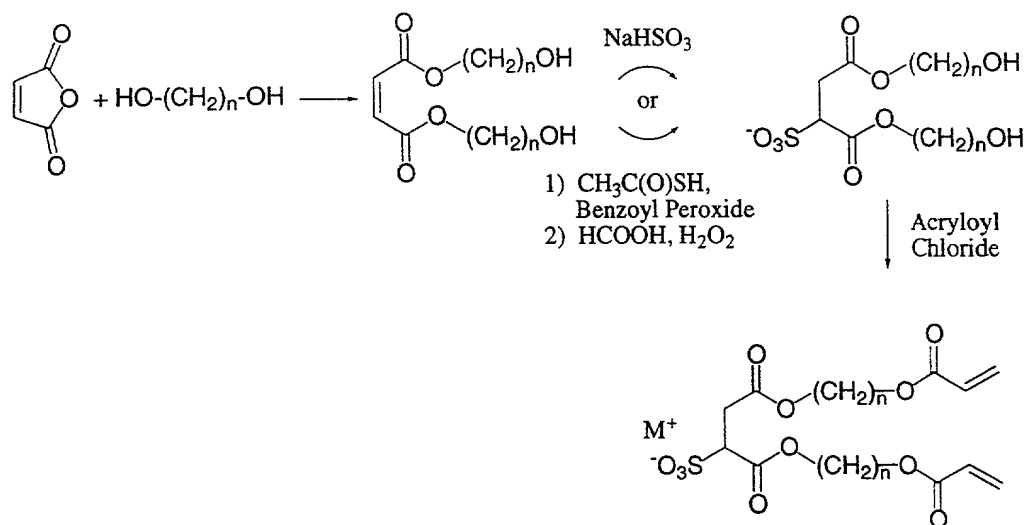


Figure 11a

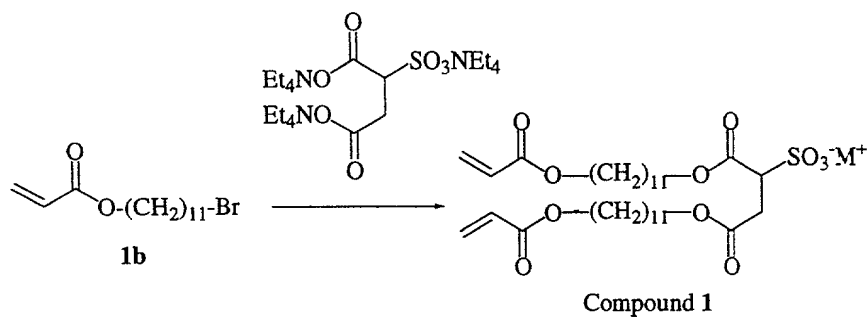


Figure 11b

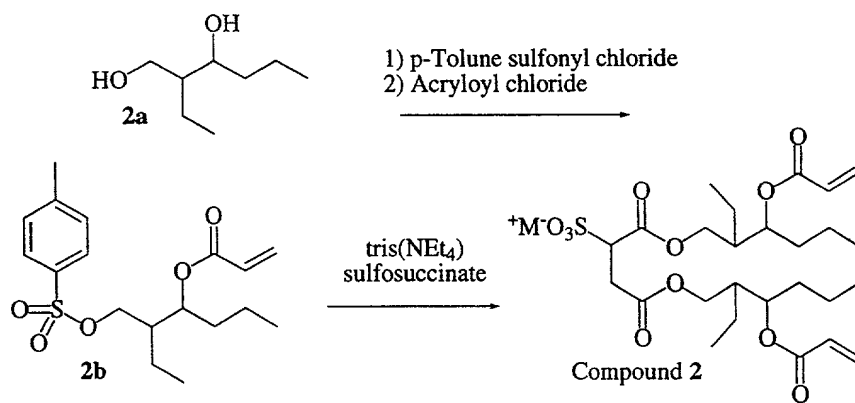


Figure 11c

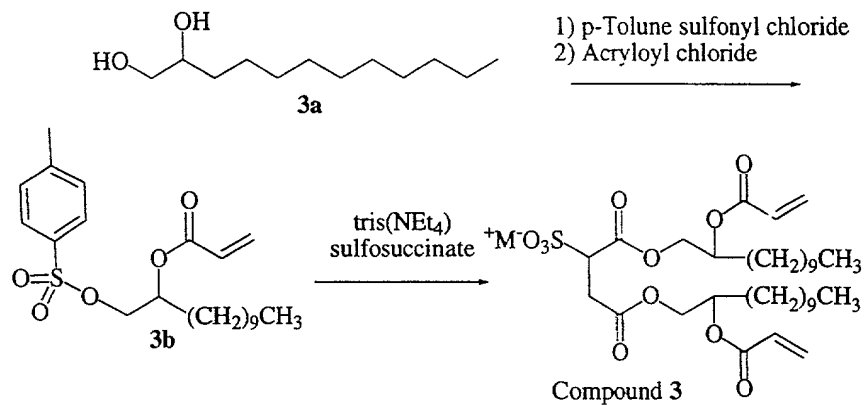


Figure 11d

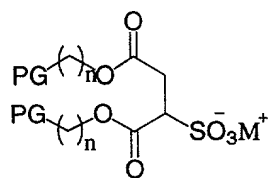


Figure 12

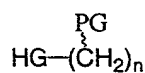


Figure 13

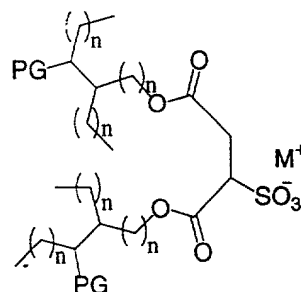


Figure 14

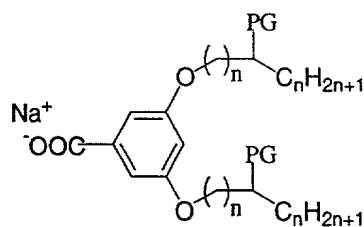


Figure 15

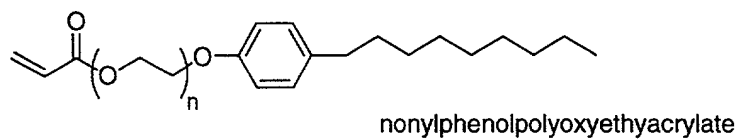
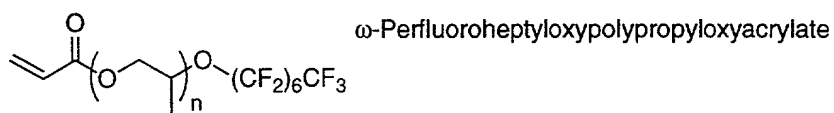
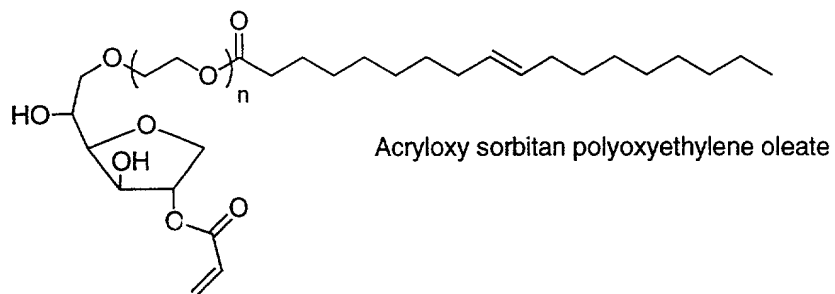


Figure 16

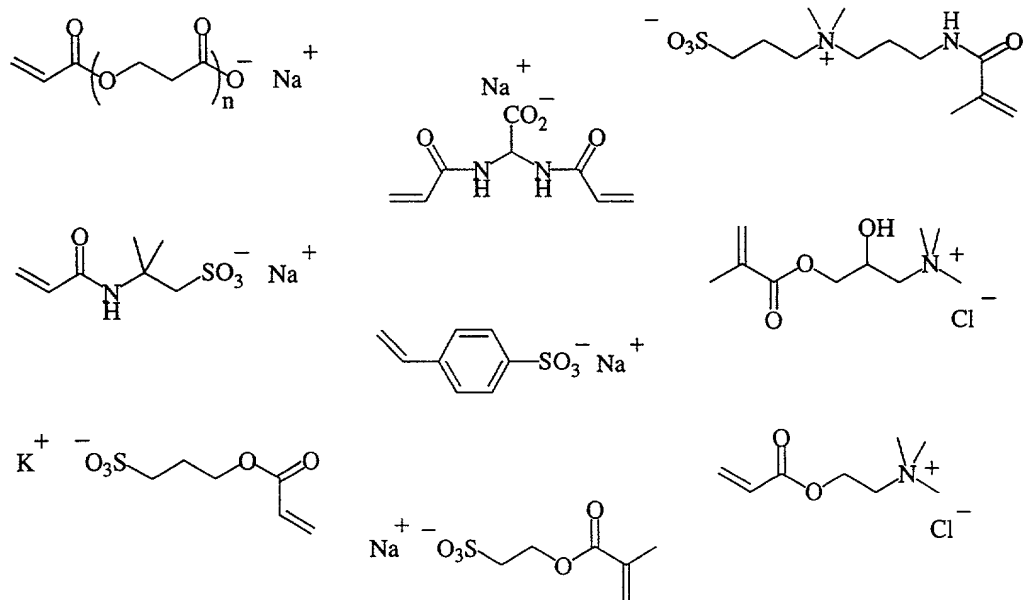
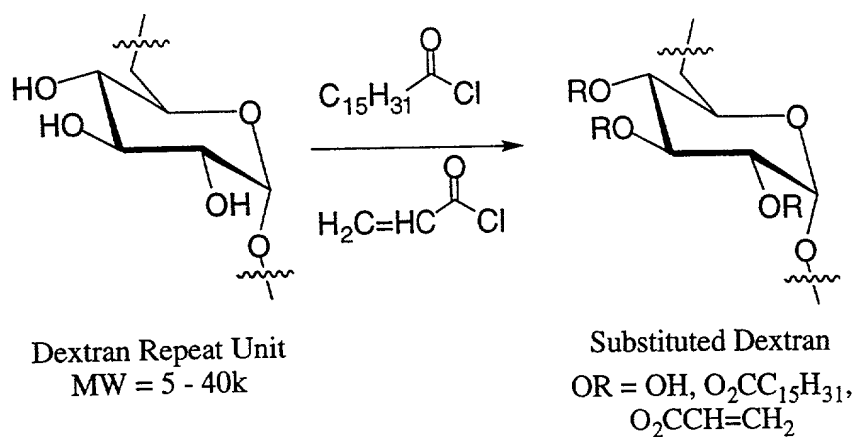
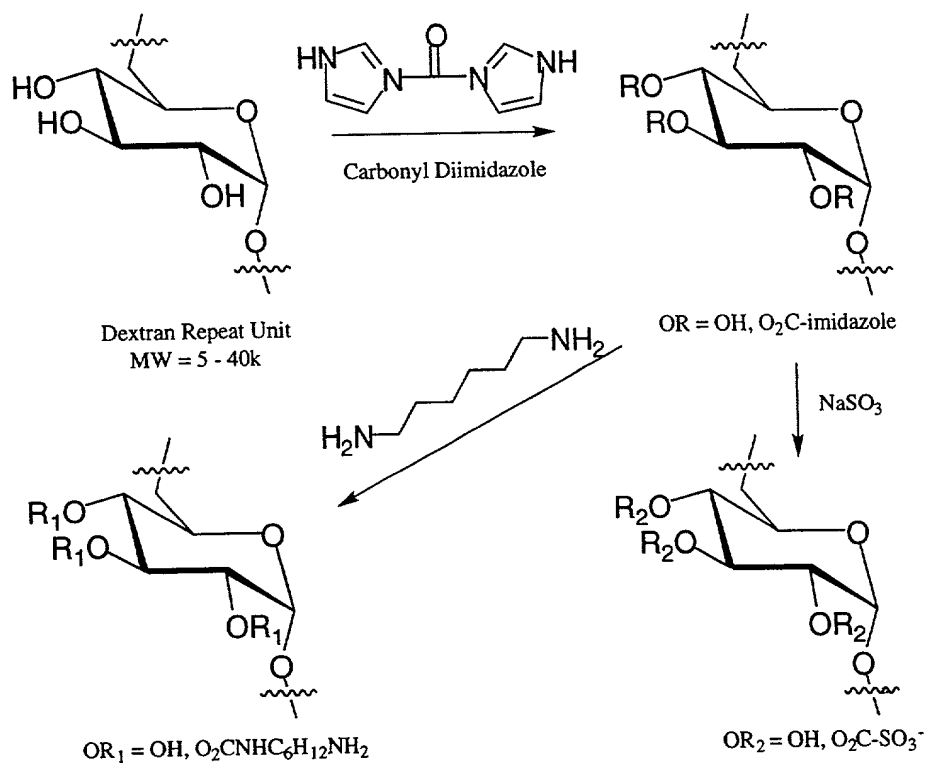


Figure 17

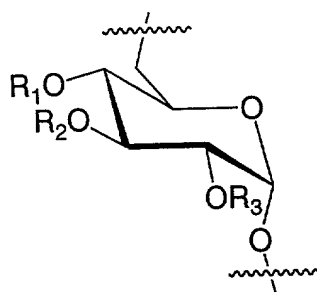


Carbohydrate based reactive surfactants



Addition of polar headgroups to polysaccharides

Figure 19c



Formula 6

Figure 19d

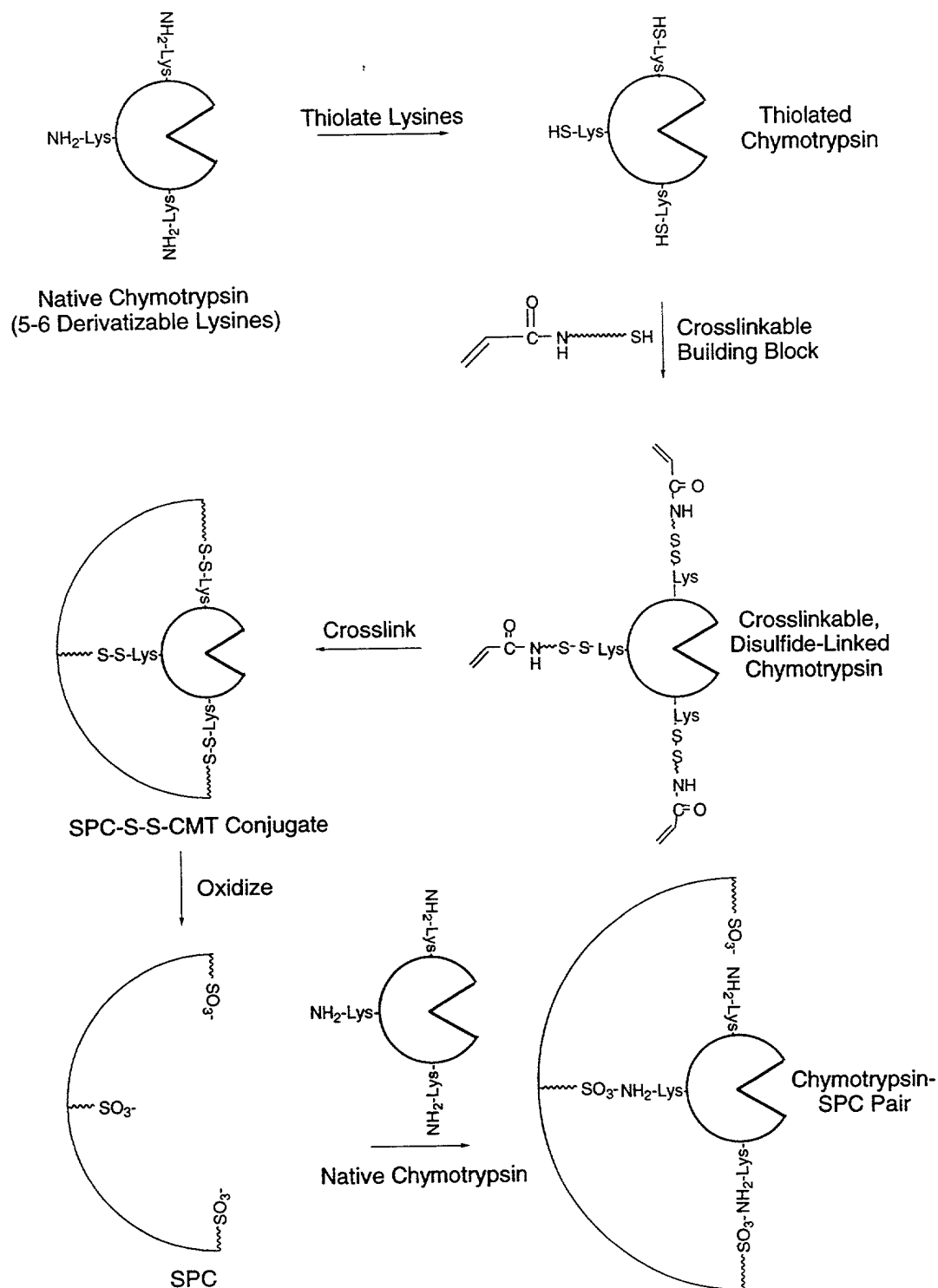


Figure 20a

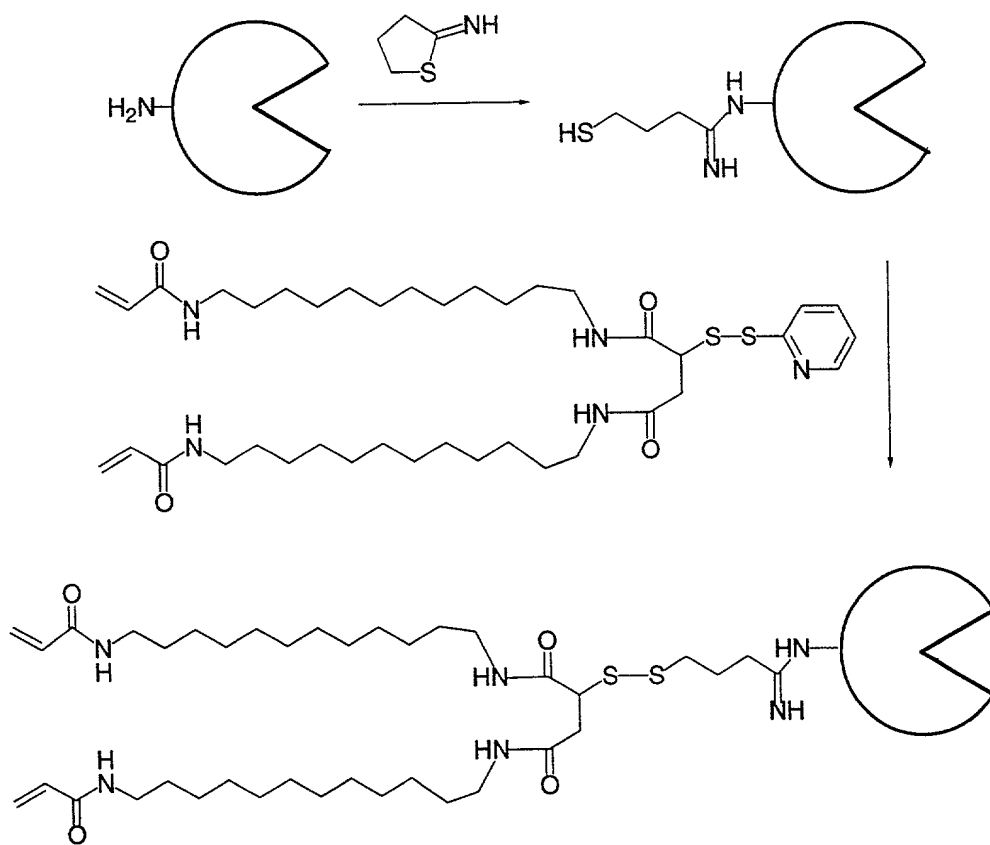


Figure 20c

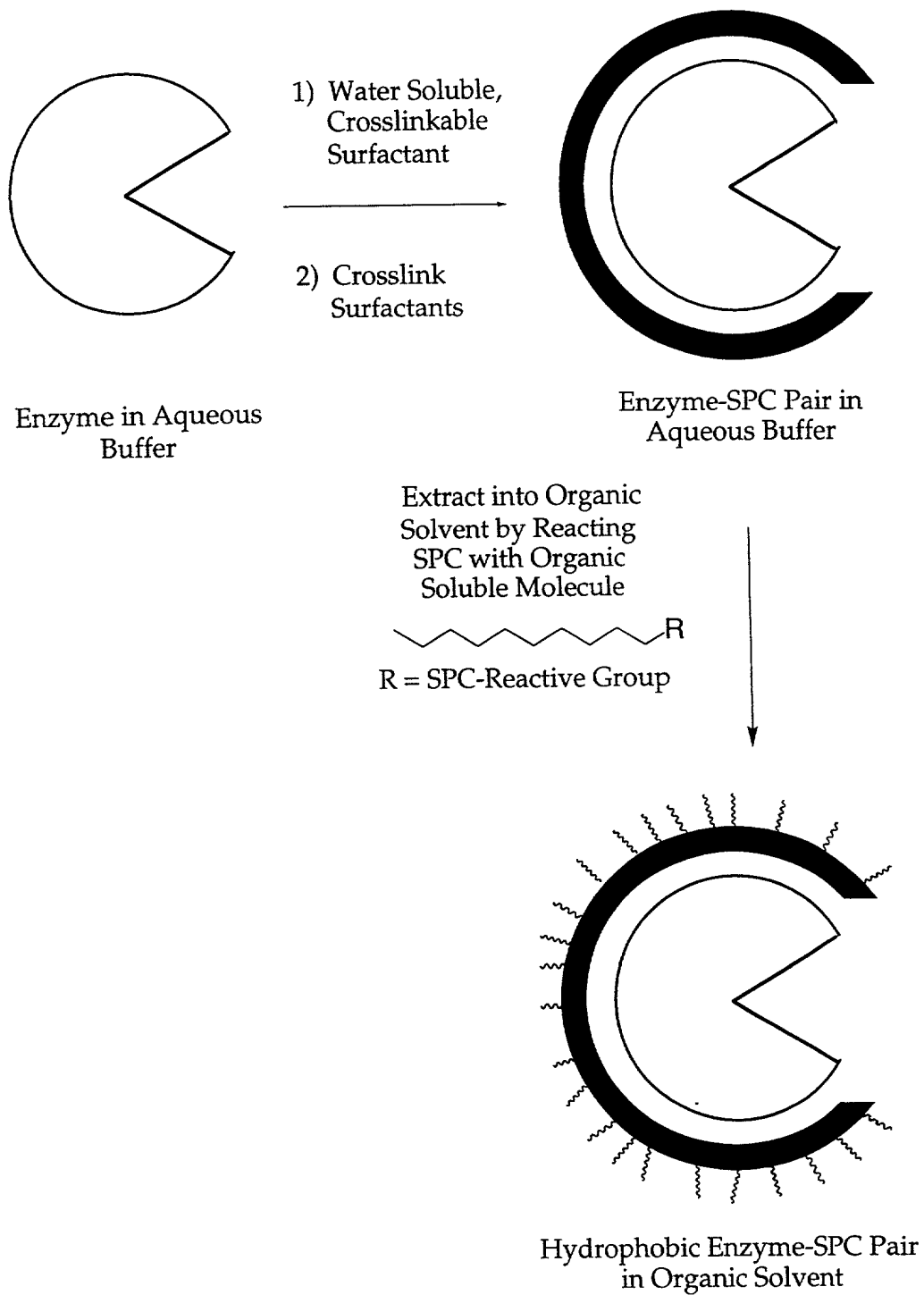


Figure 21

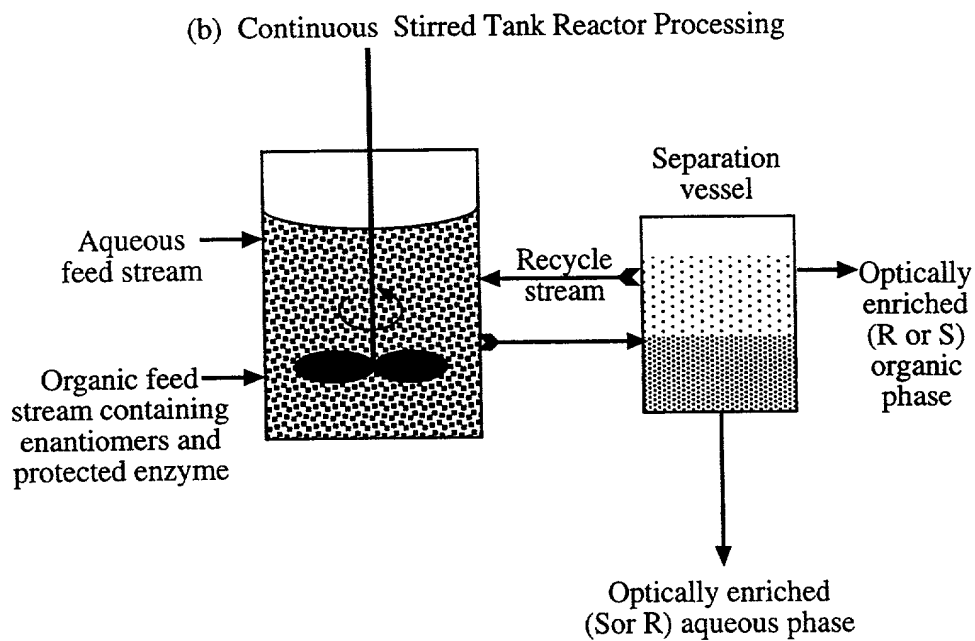
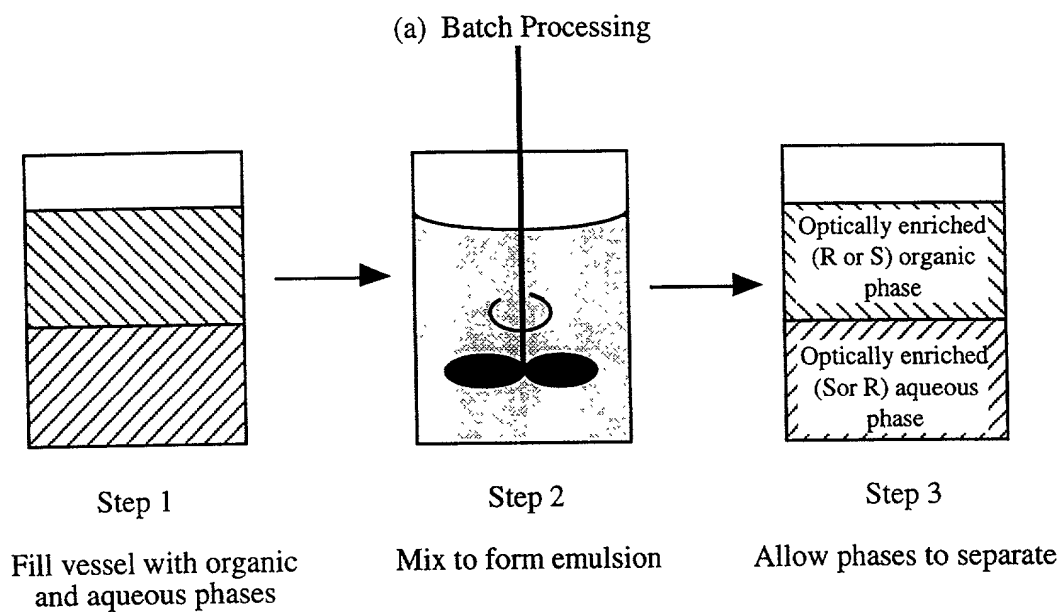


Figure 22

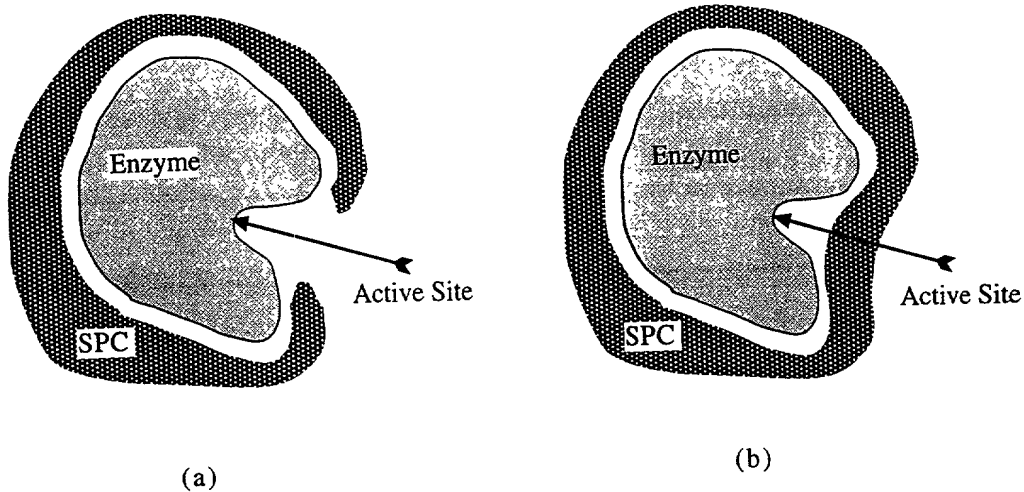


Figure 23

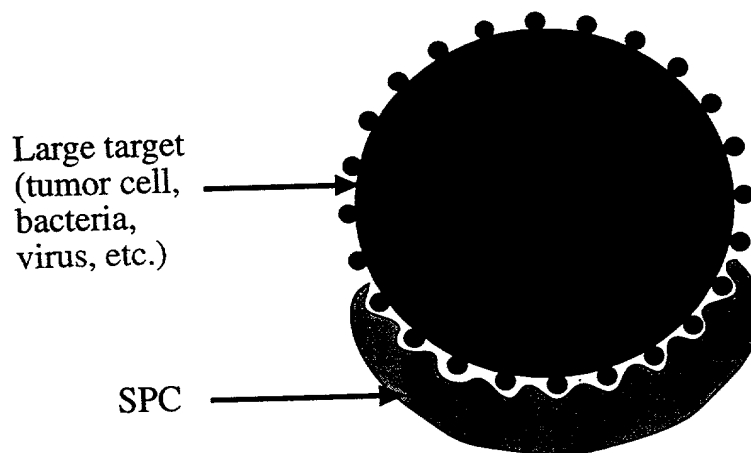


Figure 24

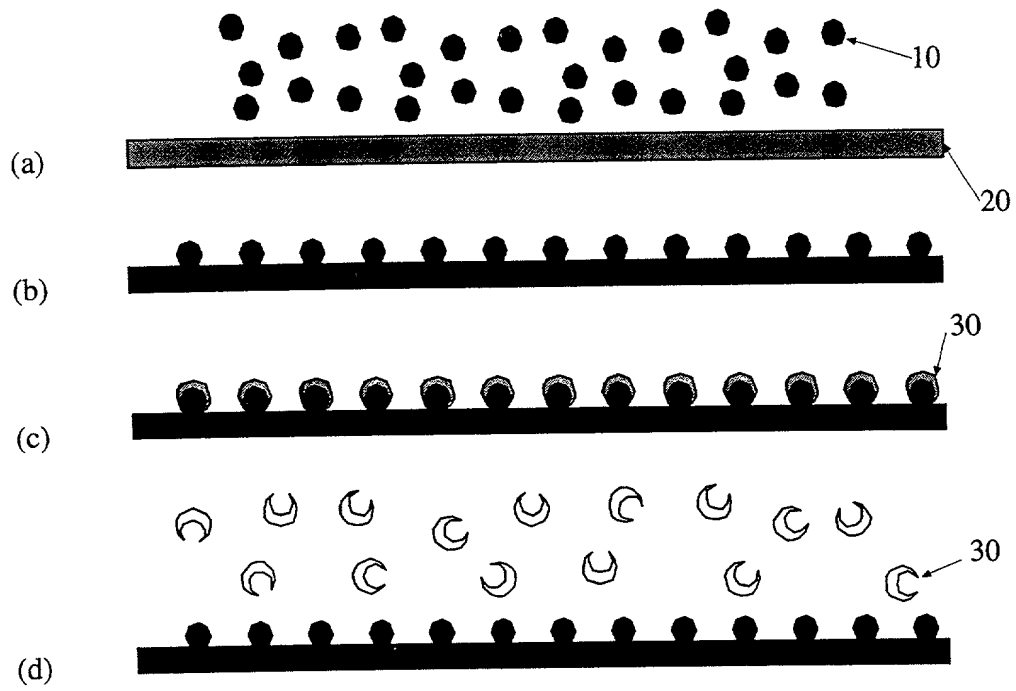


Figure 25

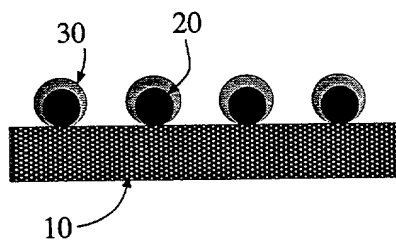


Figure 26

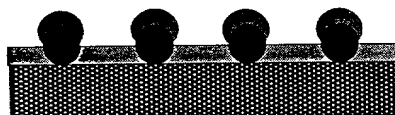
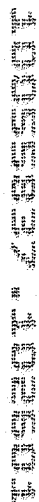
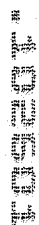
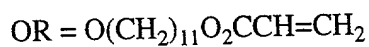
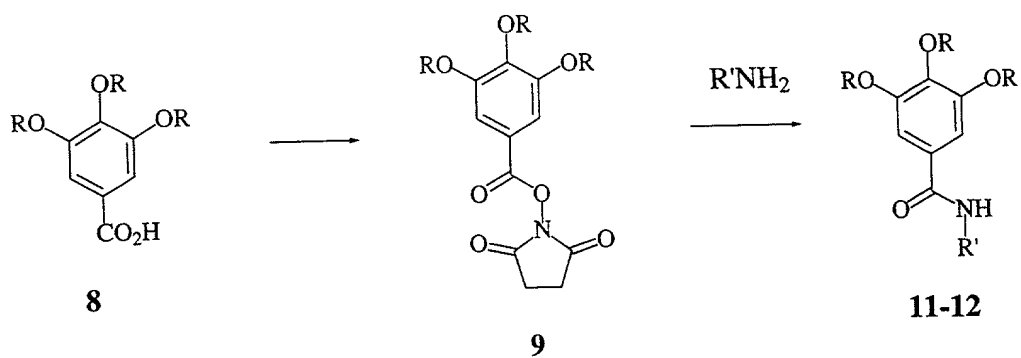


Figure 27

[illegible][illegible]



Exemplary Compounds **11** and **12**

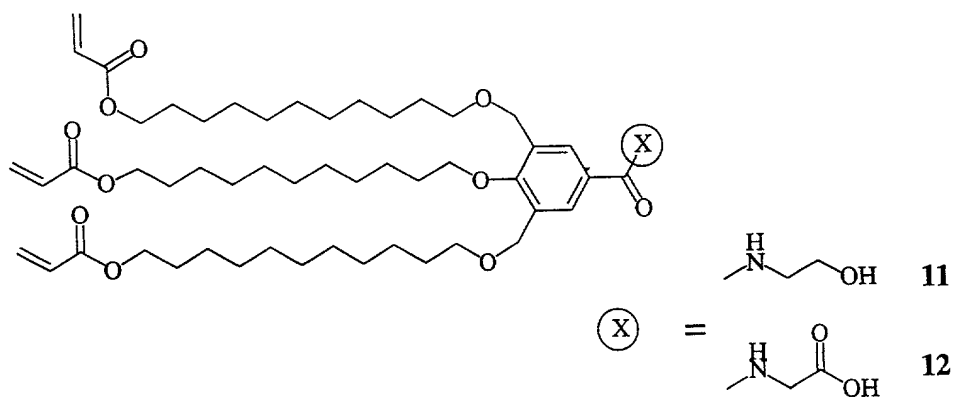
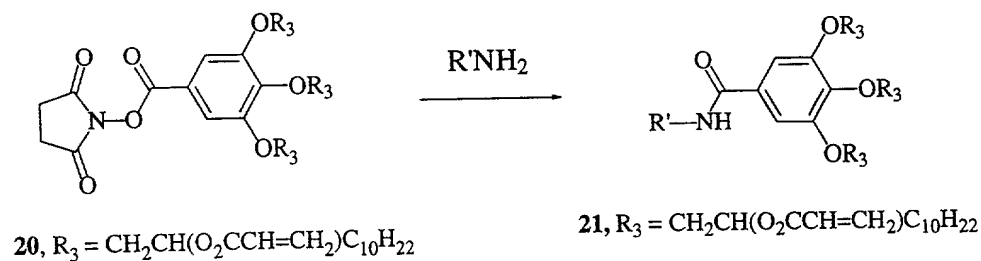
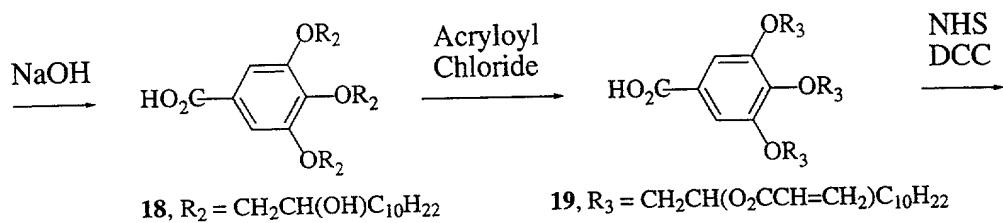
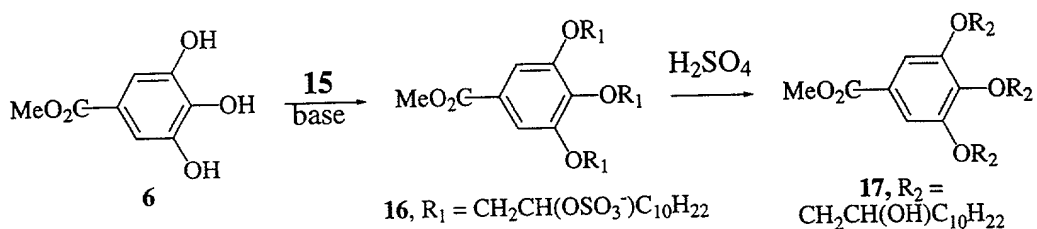
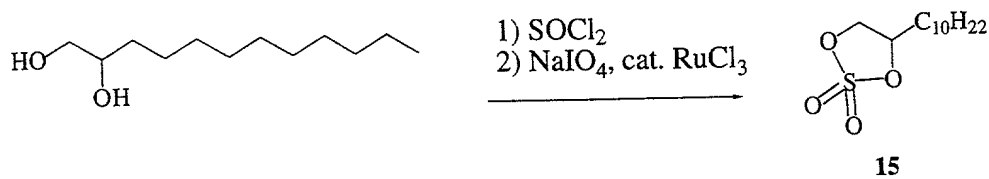
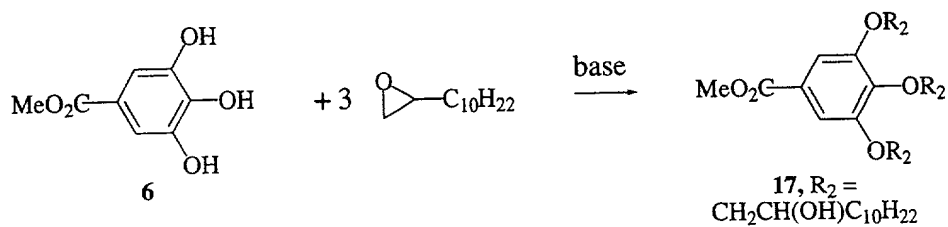


Figure 32

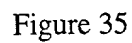
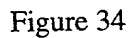


(a)



(b)

Figure 33



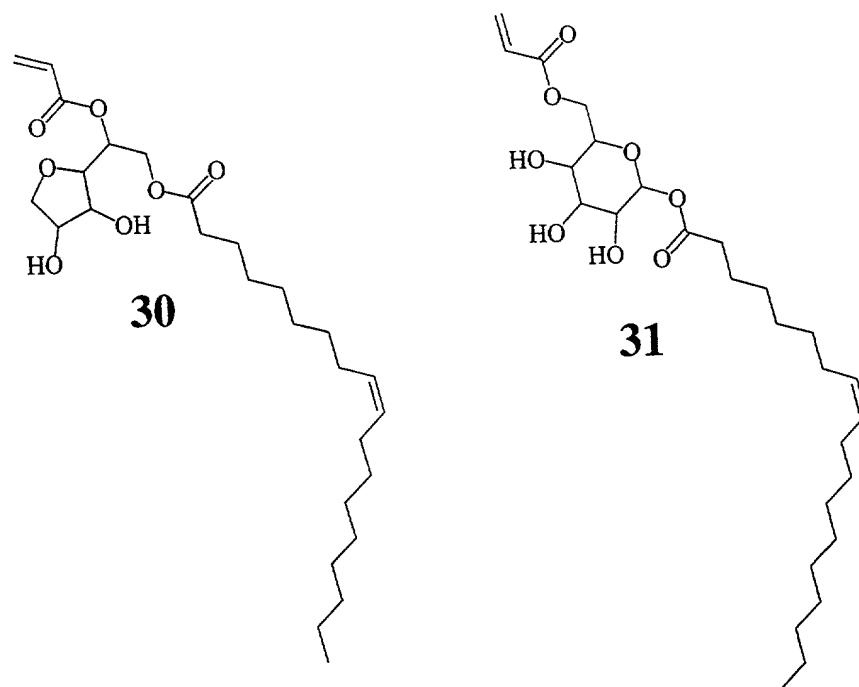


Figure 36

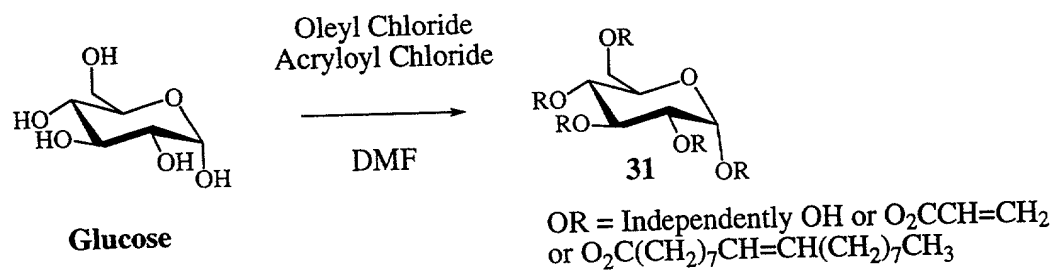


Figure 37

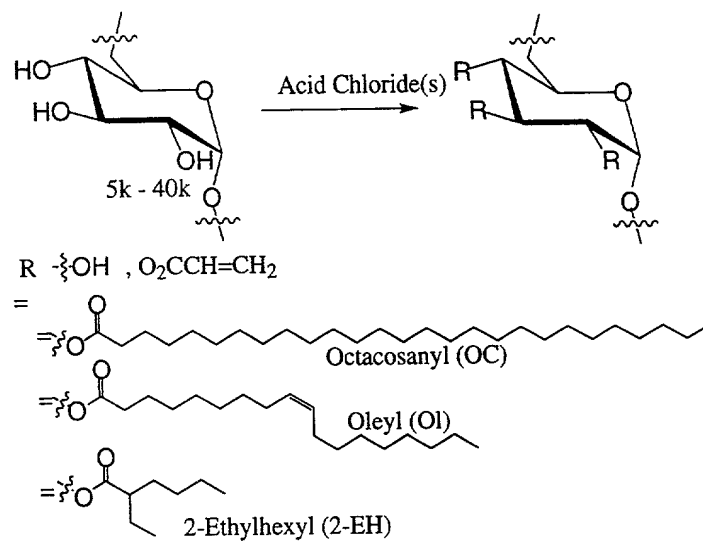


Figure 38

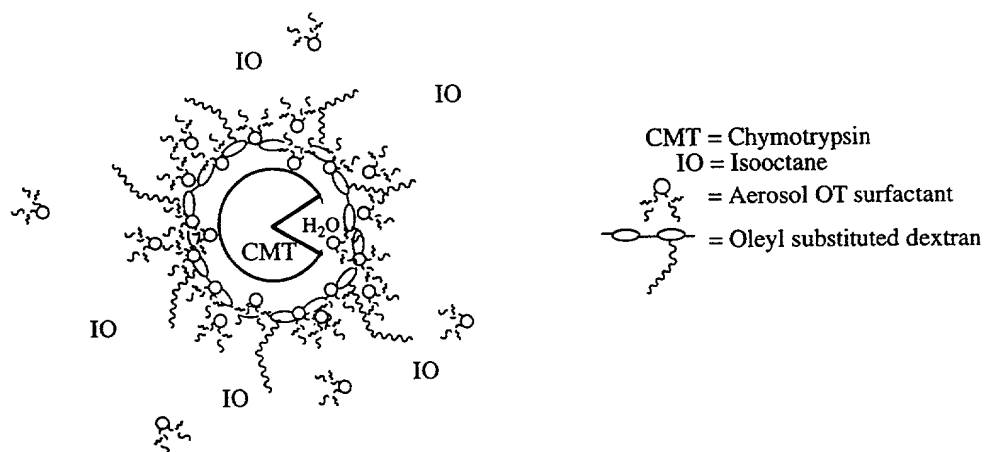
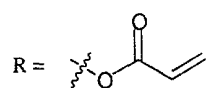
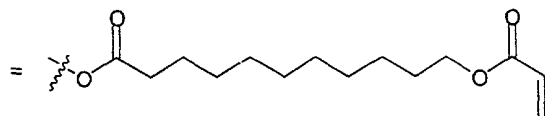


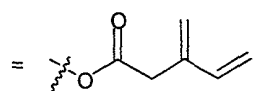
Figure 39



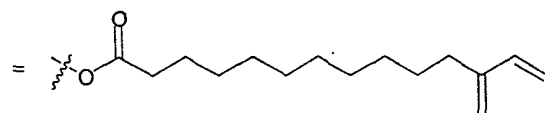
Acrylate Tail (Ac)



Acrylate Hydrophobic Tail (AcH)



Butadiene Tail (Bd)



Butadiene Hydrophobic Tail (BdH)

Figure 40

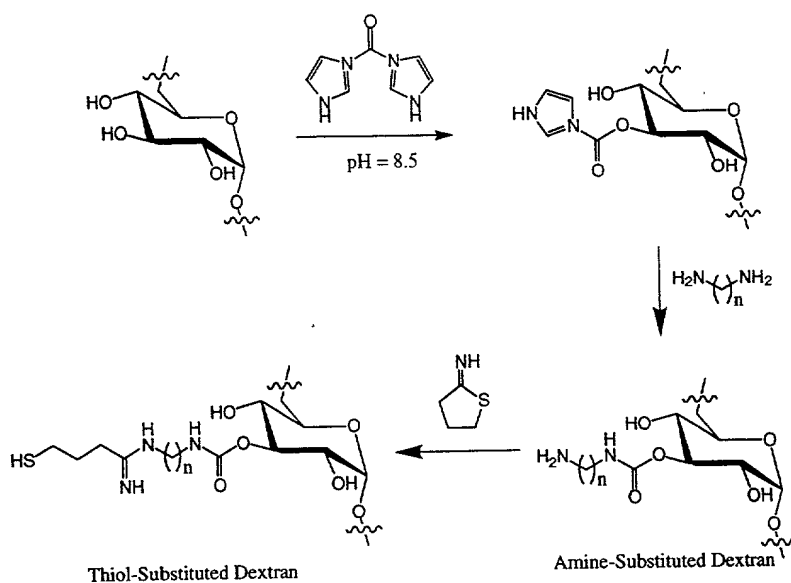
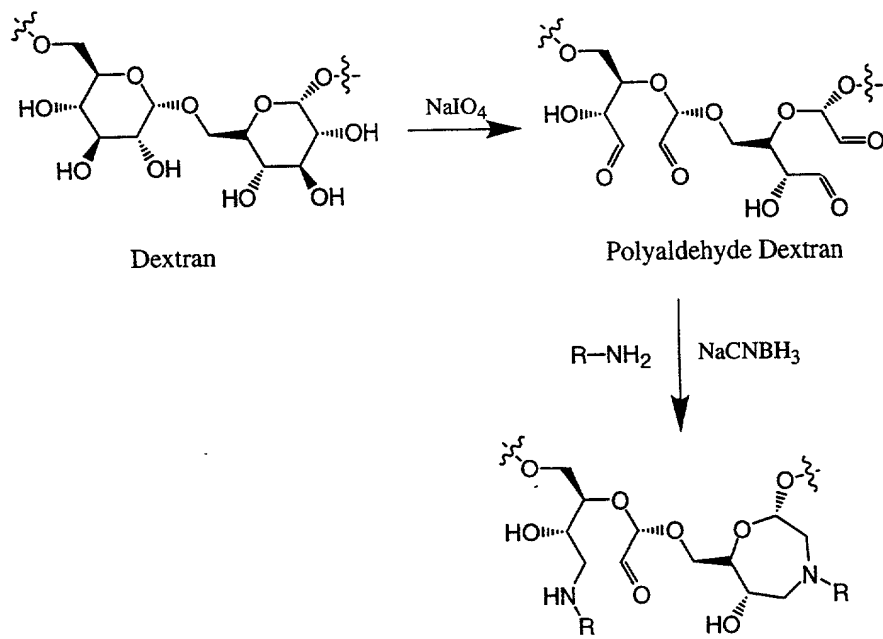


Figure 42



Secondary and Tertiary Amine Formation

Figure 43